SEQUENCE LISTING

<110> Brian Seed
      Tara Pouyani

<120> P-SELECTIN LIGANDS AND RELATED MOLECULES
      AND METHODS

<130> 00786/284002

<140> 08/756,018
<141> 1996-11-25

<150> 60/000,213
<151> 1995-06-14

<150> 08/661,960
<151> 1996-06-12

<160> 17

<170> FastSEQ for Windows Version 4.0

<210> 1
<211> 10
<212> PRT
<213> Homo sapiens

<400> 1
Ala Thr Glu Ala Gln Thr Thr Pro Pro Ala
 1   5   10

<210> 2
<211> 18
<212> PRT
<213> Homo sapiens

<400> 2
Met Ala Thr Asn Ser Leu Glu Thr Ser Thr Gly Thr Ser Gly Pro Pro
 1   5   10   15
Val Thr

<210> 3
<211> 42
<212> PRT
<213> Homo sapiens

<400> 3
Gln Leu Trp Asp Thr Trp Ala Asp Glu Ala Glu Lys Ala Leu Gly Pro
 1   5   10   15
Leu Leu Ala Arg Asp Arg Arg Gln Ala Thr Glu Tyr Glu Tyr Leu Asp
               20   25   30
Tyr Asp Phe Leu Pro Glu Thr Glu Pro Pro
               35   40

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<210> 4
<211> 20
<212> PRT
<213> Homo sapiens

<400> 4
Arg Asp Arg Arg Gln Ala Thr Glu Tyr Glu Tyr Leu Asp Tyr Asp Phe
1               5                   10                  15
Leu Pro Glu Thr
            20


<210> 5
<211> 20
<212> PRT
<213> Homo sapiens

<400> 5
Arg Asp Arg Arg Gln Ala Thr Glu Phe Glu Phe Leu Asp Phe Asp Phe
1               5                   10                  15
Leu Pro Glu Thr
            20


<210> 6
<211> 20
<212> PRT
<213> Homo sapiens

<400> 6
Arg Asp Arg Arg Gln Ala Ala Glu Tyr Glu Tyr Leu Asp Tyr Asp Phe
1               5                   10                  15
Leu Pro Glu Ala
            20


<210> 7
<211> 20
<212> PRT
<213> Homo sapiens

<400> 7
Arg Asp Arg Arg Gln Ala Ala Glu Phe Glu Phe Leu Asp Phe Asp Phe
1               5                   10                  15
Leu Pro Glu Ala
            20


<210> 8
<211> 2287
<212> DNA
<213> Homo sapiens

<400> 8
aagcttacca ccatggactg gacctggagg ttcctcttct ttgtggtggc agcagctaca      60
ggtgtccagt cccaggtgca gctggtgcag tctggggctg aggtgaagaa gcctgggtcc     120
tcggtgaagg tctcctgcaa ggcttctgga ggcaccttca gcagctatgc tatcagctgg     180
```

```
gtgcgacagg cccctggaca agggcttgag tggatgggag ggatcatccc tatctttggt    240
acagcaaact acgcacagaa gttccagggc agagtcacga ttaccgcgga cgaatccacg    300
agcacagcct acatggagct gagcagcctg agatctgagg acacggccgt gtattactgt    360
gcgagagata atggagcgta ttgtagtggt ggtagctgct actcgggctg gttcgacccc    420
tggggccagg gaaccctggt caccgtctct tcaggtgagt actgaattct agctttctgg    480
ggcaggccag gcctgacctt ggctttgggg cagggagggg gctaaggtga ggcaggtggc    540
gccagcaggt gcacacccaa tgcccatgag cccagacact ggacgctgaa cctcgcggac    600
agttaagaac ccaggggcct ctgcgcctgg cccagctct gtcccacacc gcggtcacat    660
ggcaccacct ctcttgcagc ctccaccaag ggcccatcgg tcttccccct ggcaccctcc    720
tccaagagca cctctggggg cacagcggcc ctgggctgcc tggtcaagga ctacttcccc    780
gaaccggtga cggtgtcgtg gaactcaggc gccctgacca gcggcgtgca caccttcccg    840
gctgtcctac agtcctcagg actctactcc ctcagcagcg tggtgaccgt gccctccagc    900
agcttgggca cccagaccta catctgcaac gtgaatcaca agcccagcaa caccaaggtg    960
gacaagaaag ttggtgagag gccagcacag ggagggaggg tgtctgctgg aagcaggctc   1020
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cccgtctgcc tcttcacccg gagcctctgc ccgccccact catgctcagg gagagggtct   1140
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ccctgaccta agcccacccc aaaggccaaa ctctccactc cctcagctcg gacaccttct   1320
ctcctcccag attccagtaa ctcccaatct tctctctgca gagcccaaat cttgtgacaa   1380
aactcacaca tgcccaccgt gcccaggtaa gccagcccag gcctcgccct ccagctcaag   1440
gcgggacagg tgccctagag tagcctgcat ccagggacag gccccagccg ggtgctgaca   1500
cgtccacctc catctcttcc tcagcacctg aactcctggg gggaccgtca gtcttcctct   1560
tccccccaaa acccaaggac accctcatga tctcccggac ccctgaggtc acatgcgtgg   1620
tggtggacgt gagccacgaa gaccctgagg tcaagttcaa ctggtacgtg gacggcgtgg   1680
aggtgcataa tgccaagaca aagccgcggg aggagcagta caacagcacg taccgggtgg   1740
tcagcgtcct caccgtcctg caccaggact ggctgaatgg caaggagtac aagtgcaagg   1800
tctccaacaa agccctccca gcccccatcg agaaaaccat ctccaaagcc aaaggtggga   1860
cccgtggggt gcgagggcca catggacaga ggccggctcg cccaccctc tgccctgaga   1920
gtgaccgctg taccaacctc tgtcctacag ggcagccccg agaaccacag gtgtacaccc   1980
tgcccccatc ccgggatgag ctgaccaaga accaggtcag cctgacctgc ctggtcaaag   2040
gcttctatcc cagcgacatc gccgtggagt gggagagcaa tgggcagccg gagaacaact   2100
acaagaccac gcctcccgtg ctggactccg acggctcctt cttcctctac agcaagctca   2160
ccgtggacaa gagcaggtgg cagcagggga cgtcttctc atgctccgtg atgcatgagg   2220
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ggccggc                                                            2287
                                                                    2287
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<210> 9
<211> 442
<212> PRT
<213> Homo sapiens

<400> 9

```
Lys Leu Thr Thr Met Asp Trp Thr Trp Arg Phe Leu Phe Phe Val Val
1               5                   10                  15
Ala Ala Ala Thr Gly Val Gln Ser Gln Val Gln Leu Val Gln Ser Gly
            20                  25                  30
Ala Glu Val Lys Lys Pro Gly Ser Ser Val Lys Val Ser Cys Lys Ala
            35                  40                  45
Ser Gly Gly Thr Phe Ser Ser Tyr Ala Ile Ser Trp Val Arg Gln Ala
        50                  55                  60
Pro Gly Gln Gly Leu Glu Trp Met Gly Gly Ile Ile Pro Ile Phe Gly
65                  70                  75                  80
Thr Ala Asn Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Ile Thr Ala
                85                  90                  95
Asp Glu Ser Thr Ala Arg Asp Asn Gly Ala Tyr Cys Ser Gly Gly Ser
            100                 105                 110
Cys Tyr Ser Gly Trp Phe Asp Pro Trp Gly Gln Gly Thr Leu Val Thr
```

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```
          115                    120                    125
Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro
    130                    135                    140
Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val
145                    150                    155                    160
Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala
                   165                    170                    175
Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly
                   180                    185                    190
Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Asp Lys
                   195                    200                    205
Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
    210                    215                    220
Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
225                    230                    235                    240
Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
                   245                    250                    255
Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
                   260                    265                    270
Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
                   275                    280                    285
Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
    290                    295                    300
His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
305                    310                    315                    320
Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
                   325                    330                    335
Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu
                   340                    345                    350
Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
                   355                    360                    365
Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
    370                    375                    380
Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
385                    390                    395                    400
Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
                   405                    410                    415
Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
                   420                    425                    430
Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
                   435                    440
```

<210> 10
<211> 1894
<212> DNA
<213> Homo sapiens

<400> 10
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atggcgctgt cctgggttct tacagtcctg agcctcctac ctctgctgga agcccagatc   60
ccattgtgtg ccaacctagt accggtgccc atcaccaacg ccaccctgga ccagatcact  120
ggcaagtggt tttatatcgc atcggccttt cgaaacgagg agtacaataa gtcggttcag  180
gagatccaag caaccttctt ttacttcacc cccaacaaga cagaggacac gatctttctc  240
agagagtacc agacccgaca ggaccagtgc atctataaca ccacctacct gaatgtccag  300
cgggaaaatg ggaccatctc cagatacgtg ggaggccaag agcatttcgc tcacttgctg  360
atcctcaggg acaccaagac ctacatgctt gcttttgacg tgaacgatga gaagaactgg  420
gggctgtctg tctatgctga caagccagag acgaccaagg agcaactggg agagttctac  480
gaagctctcg actgcttgcg cattcccaag tcagatgtcg tgtacaccga ttggaaaaag  540
```

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```
gataagtgtg agccactgga gaagcagcac gagaaggaga ggaaacagga ggaggggggaa    600
tcggatcccg agggtgagta ctaagcttca gcgctcctgc ctggacgcat cccggctatg    660
cagccccagt ccagggcagc aaggcaggcc ccgtctgcct cttcacccgg agcctctgcc    720
cgccccactc atgctcaggg agagggtctt ctggcttttt cccaggctct gggcaggcac    780
aggctaggtg cccctaaccc aggccctgca cacaaagggg caggtgctgg gctcagacct    840
gccaagagcc atatccggga ggaccctgcc cctgacctaa gcccacccca aaggccaaac    900
tctccactcc ctcagctcgg acaccttctc tcctcccaga ttccagtaac tcccaatctt    960
ctctctgcag agcccaaatc ttgtgacaaa actcacacat gcccaccgtg cccaggtaag   1020
ccagcccagg cctcgccctc cagctcaagg cgggacaggt gccctagagt agcctgcatc   1080
cagggacagg ccccagccgg gtgctgacac gtccacctcc atctcttcct cagcacctga   1140
actcctgggg ggaccgtcag tcttcctctt ccccccaaaa cccaaggaca ccctcatgat   1200
ctcccggacc cctgaggtca catgcgtggt ggtggacgtg agccacgaag accctgaggt   1260
caagttcaac tggtacgtgg acggcgtgga ggtgcataat gccaagacaa agccgcggga   1320
ggagcagtac aacagcacgt accgggtggt cagcgtcctc accgtcctgc accaggactg   1380
gctgaatggc aaggagtaca agtgcaaggt ctccaacaaa gccctcccag cccccatcga   1440
gaaaaccatc tccaaagcca aaggtgggac ccgtggggtg cgagggccac atggacagag   1500
gccggctcgg cccaccctct gccctgagag tgaccgctgt accaacctct gtcctacagg   1560
gcagccccga gaaccacagg tgtacaccct gcccccatcc cgggatgagc tgaccaagaa   1620
ccaggtcagc ctgacctgcc tggtcaaagg cttctatccc agcgacatcg ccgtggagtg   1680
ggagagcaat gggcagccgg agaacaacta caagaccacg cctcccgtgc tggactccga   1740
cggctccttc ttcctctaca gcaagctcac cgtggacaag agcaggtggc agcaggggaa   1800
cgtcttctca tgctccgtga tgcatgaggc tctgcacaac cactacacgc agaagagcct   1860
ctccctgtct ccgggtaaat gagtgcgacg gccg                                1894
```

<210> 11
<211> 437
<212> PRT
<213> Homo sapiens

<400> 11
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Met Ala Leu Ser Trp Val Leu Thr Val Leu Ser Leu Leu Pro Leu Leu
1               5                   10                  15
Glu Ala Gln Ile Pro Leu Cys Ala Asn Leu Val Pro Val Pro Ile Thr
            20                  25                  30
Asn Ala Thr Leu Asp Gln Ile Thr Gly Lys Trp Phe Tyr Ile Ala Ser
            35                  40                  45
Ala Phe Arg Asn Glu Glu Tyr Asn Lys Ser Val Gln Glu Ile Gln Ala
        50                  55                  60
Thr Phe Phe Tyr Phe Thr Pro Asn Lys Thr Glu Asp Thr Ile Phe Leu
65                  70                  75                  80
Arg Glu Tyr Gln Thr Arg Gln Asp Gln Cys Ile Tyr Asn Thr Thr Tyr
                85                  90                  95
Leu Asn Val Gln Arg Glu Asn Gly Thr Ile Ser Arg Tyr Val Gly Gly
            100                 105                 110
Gln Glu His Phe Ala His Leu Leu Ile Leu Arg Asp Thr Lys Thr Tyr
            115                 120                 125
Met Leu Ala Phe Asp Val Asn Asp Glu Lys Asn Trp Gly Leu Ser Val
    130                 135                 140
Tyr Ala Asp Lys Pro Glu Thr Thr Lys Glu Gln Leu Gly Glu Phe Tyr
145                 150                 155                 160
Glu Ala Leu Asp Cys Leu Arg Ile Pro Lys Ser Asp Val Val Tyr Thr
                165                 170                 175
Asp Trp Lys Lys Asp Lys Cys Glu Pro Leu Glu Lys Gln His Glu Lys
            180                 185                 190
Glu Arg Lys Gln Glu Glu Gly Glu Ser Asp Pro Glu Gly Glu Pro Lys
            195                 200                 205
Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu
    210                 215                 220
```

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Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr
225   230   235   240
Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val
            245   250   255
Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val
            260   265   270
Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser
            275   280   285
Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu
        290   295   300
Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala
305   310   315   320
Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro
                325   330   335
Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn Gln
            340   345   350
Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala
        355   360   365
Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr
    370   375   380
Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu
385   390   395   400
Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser
            405   410   415
Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser
            420   425   430
Leu Ser Pro Gly Lys
            435

<210> 12
<211> 442
<212> PRT
<213> Homo sapiens

<400> 12
Lys Leu Thr Thr Met Asp Trp Thr Trp Arg Phe Leu Phe Phe Val Val
1   5   10   15
Ala Ala Ala Thr Gly Val Gln Ser Gln Val Gln Leu Val Gln Ser Gly
            20   25   30
Ala Glu Val Lys Lys Pro Gly Ser Ser Val Lys Val Ser Cys Lys Ala
            35   40   45
Ser Gly Gly Thr Phe Ser Ser Tyr Ala Ile Ser Trp Val Arg Gln Ala
        50   55   60
Pro Gly Gln Gly Leu Glu Trp Met Gly Gly Ile Ile Pro Ile Phe Gly
65   70   75   80
Thr Ala Asn Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Ile Thr Ala
            85   90   95
Asp Glu Ser Thr Ala Arg Asp Asn Gly Ala Tyr Cys Ser Gly Gly Ser
            100   105   110
Cys Tyr Ser Gly Trp Phe Asp Pro Trp Gly Gln Gly Thr Leu Val Thr
        115   120   125
Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro
    130   135   140
Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val
145   150   155   160
Lys Asp Tyr Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala
            165   170   175

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```
Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly
              180                     185                   190
Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Asp Lys
              195                 200                   205
Lys Val Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys
              210             215                 220
Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
225             230                     235                   240
Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
              245                 250                   255
Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Asn Phe Ser Trp
              260             265                   270
Tyr Val Asp Gly Val Glu Val His Asn Asn Lys Thr Lys Pro Arg Glu
              275             280                   285
Glu Asn Tyr Ser Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
              290             295                   300
His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Asn Val Ser Asn
305                 310                 315                   320
Lys Ala Leu Pro Ala Pro Ile Glu Lys Asn Ile Ser Lys Ala Lys Gly
                325                 330                   335
Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu
              340                 345                   350
Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
              355                 360                   365
Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
    370                 375                 380
Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
385                 390                 395                   400
Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
              405                 410                   415
Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
              420                 425                   430
Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
              435                 440
```

<210> 13
<211> 42
<212> PRT
<213> Homo sapiens

<400> 13
```
Pro Glu Met Leu Arg Asn Ser Thr Asp Thr Thr Pro Leu Thr Gly Pro
1                 5                 10                  15
Gly Thr Pro Glu Ser Thr Thr Val Glu Pro Ala Ala Arg Arg Ser Thr
              20                25                  30
Gly Leu Asp Ala Gly Gly Ala Val Thr Glu
              35              40
```

<210> 14
<211> 16
<212> PRT
<213> Homo sapiens

<400> 14
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Leu Thr Thr Glu Leu Ala Asn Met Gly Asn Leu Ser Thr Asp Ser Ala
1                 5                 10                  15
```

```
<210> 15
<211> 13
<212> PRT
<213> Homo sapiens

<400> 15
Thr Gly Asp Tyr Tyr Glu Asp Ser Tyr Glu Asp Ile Ser
 1               5                  10


<210> 16
<211> 9
<212> PRT
<213> Homo sapiens

<400> 16
Glu Asp Tyr Glu Tyr Asp Glu Leu Pro
 1               5


<210> 17
<211> 91
<212> PRT
<213> Homo sapiens

<400> 17
Ile Thr Thr Asn Ser Pro Glu Thr Ser Ser Arg Thr Ser Gly Ala Pro
 1               5                  10                  15
Val Thr Thr Ala Ala Ser Ser Leu Glu Thr Ser Arg Gly Thr Ser Gly
                20                  25                  30
Pro Pro Leu Thr Met Ala Thr Val Ser Leu Glu Thr Ser Lys Gly Thr
                35                  40                  45
Ser Gly Pro Pro Val Thr Met Ala Thr Asp Ser Leu Glu Thr Ser Thr
        50                  55                  60
Gly Thr Thr Gly Pro Pro Val Thr Met Thr Thr Gly Ser Leu Glu Pro
65                  70                  75                  80
Ser Ser Gly Ala Ser Gly Pro Gln Val Ser Ser
                85                  90
```